



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,707	10/24/2003	Kenny K. Chinn	AB-123U1 / 585-0026US-C	9782
70573	7590	10/16/2007		
Wong, Cabello, Lutsch, Rutherford & Brucculer L.L.P			EXAMINER	
20333 SH 249			CAZAN, LIVIUS RADU	
Suite 600				
Houston, TX 77070			ART UNIT	PAPER NUMBER
			3729	
			MAIL DATE	DELIVERY MODE
			10/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/692,707

Applicant(s)

CHINN ET AL.

Examiner

Livius R. Cazan

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1 and 3-14 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/1/2007 has been entered.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. **Claims 1, 3, 4, and 7-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Flies (US4578573 to Flies et al.) in view of Yamamoto (US5223676 to Yamamoto et al.).

As discussed in the Office Action mailed on 7/11/2007, Flies discloses substantially the same invention as the Applicant.

However, Flies does not disclose the newly added limitation "wherein the electrical contacts in each row are formed from a sheet separate from the printed circuit board". Rather, the contacts of Flies are formed by etching a metal layer on the surface of the circuit board, leaving the circuit pattern, i.e. the electrical contacts.

Yamamoto discloses an alternative method of attaching a circuit pattern to a substrate, whereby a circuit pattern (11, Fig. 2) punched from a metal sheet is laminated

to the circuit board (see Fig. 2; see ln. 66 of col. 2 to ln. 2 of col. 3). This method allows for thicker metal patterns to be attached to the board.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Flies, in view of the teachings of Yamamoto, by substituting the method of forming contacts of Flies with that disclosed by Yamamoto, since the method of Yamamoto is an art-recognized equivalent method of circuit pattern attachment.

3. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Flies and Yamamoto in view of Spooner (US3396461 to Spooner et al.).

Flies and Yamamoto disclose substantially the same invention as the Applicant, except for the contacts comprising one of the metals/alloys recited in claim 5.

Spooner teaches that it is known to provide a precious metal layer such as platinum on the surface of contacts to provide wear resistance and insure low contact resistance (see col. 1, lns. 55-65).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the contacts of Flies and Yamamoto with such a platinum layer for the same advantages discussed above.

4. **Claims 6 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Flies and Yamamoto in view of Eisenreich (US3673467).

Flies and Yamamoto disclose substantially the same invention as the Applicant, except for the contacts comprising contact rows that are not straight, and the connector pin being configured to provide electrical connection to one of the structures recited in

Art Unit: 3729

claim 9 (to the extent Applicant disagrees that Flies and Yamamoto inherently must have at least one external lead as discussed above).

Eisenreich discloses both straight and non-straight rows of contacts (see Figs. 3 and 4. Eisenreich also discloses external leads (such as 29a, 29b, 31a, and 31b, Fig. 1), to which the connector is electrically connected.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the contacts of Flies and Yamamoto in non-straight rows, since this arrangement is an art-recognized equivalent arrangement, and therefore constitutes a mere design consideration. Further, it would have been obvious to provide the invention of Flies and Yamamoto with such external leads, for providing electrical signals and/or power to the connector pin.

Response to Arguments

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

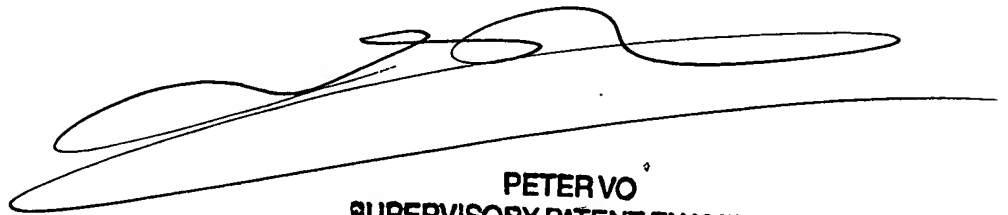
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Livius R. Cazan whose telephone number is (571) 272-8032. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571)272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LRC/ 10/11/2007



PETER VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700